

Loss Mitigation Grant Program Wind Resistive Device (WRD) Product Evaluation

The product as described herein has been evaluated by the Department of Commerce and Consumer Affairs (DCCA) for compliance with the technical requirements for wind resistive devices installed in single or multi-family residential dwellings. Installation costs of approved products are partially reimbursable under the provisions of the Loss Mitigation Grant Program. The results of the product evaluation are presented in the following report.

1.0 Product Information

1.1 Product Name:

6.8-HR Aluminum Accordion Shutter

1.2 Description:

The 6.8 and HR Aluminum Accordion Shutters are extruded aluminum, vertical slat, operable shutters designed to be permanently mounted to an exterior wall. The shutters can be latched to provide impact and wind pressure resistance to glazed openings. The vertical slats of the 6.8 shutters are 0.054" thick and the HR shutters 0.0618" thick.

1.3 Category:

Submitted for evaluation as a WRD option 3- Exterior opening protection

1.4 Submitted By:

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2.0 Product Evaluation

2.1 Wind Loads:

Tables indicating the allowable design pressures for shutters of varying spans and anchor schedules are given on sheets 7, 8, 11, 12 and 13 of the referenced drawing No. 06-374. However, no test reports have been submitted at this time for evaluation of performance with ASTM E1996. No test reports have been referenced in either drawing No. 06-374 or Miami-Dade NOA No. 06-0512.01.

2.2 Impact Resistance:

No test reports have been submitted at this time. No missile impact tests have been referenced in either drawing No. 06-374 or Miami-Dade NOA No. 06-0512.01. However, Miami-Dade NOA No. 06-0512.01 does state this product has a Large and Small Missile Impact Rating.

2.3 Installation:

Installation shall be performed strictly in accordance with the details indicated on sheets 1 through 13 of 13 of drawing No. 06-374. For installation on wood frame construction the drawings specify that the wood must have at least an SG=0.55 or better. In Hawaii, typically Douglas fir lumber is used for frame construction and it has an SG=0.50.

2.4 Substantiating Data:

- a. Drawing No. 06-374, titled "RE• 6.8-HR Accordion Shutter", sheets 1 through 13 of 13, prepared by Thornton-Tomasetti Group, signed and sealed by J.W. Knezevich, P.E. (FL License No. 0041967) dated 4/24/2006
- b. Miami-Dade County, Building Code Compliance Office Notice of Acceptance (NOA) No. 06-0512.01, Expiration Date: 04/04/2012

3.0 Findings

Insufficient test data has been submitted at this time to approve the 6.8-HR Accordion Shutter as an acceptable WRD under the requirements of the loss mitigation grant program.

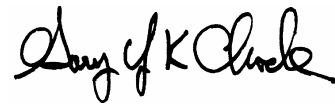
No wind Static or Cyclic wind pressure or Missile impact test results have been submitted or referenced in the substantiating documentation. The Testing and Test Report Minimum Information Requirements are given in Section 4.0 of the Hawaii Department of Commerce and Consumer Affairs, "Submittal Requirements for Product Evaluations".

Anchorage details have not been provided for single wall construction common to Hawaii. Additional data must be submitted for WRD approved use on this type of construction. Also, wood connection anchorage schedules are given only for attachments to Southern Yellow Pine members and not the more commonly used (in Hawaii) Douglas fir. Although the allowable shear and pullout loads on these two wood types are similar, the capacities of the Douglas fir attachments are slightly less, which could require decreased fastener spacing or increased fastener size. Provide an alternative or approved connection schedule for attachments to Douglas fir, for WRD acceptable use on wood construction.

March 6, 2008

3.1 Limitations:

- a. Due to omitted test result data the 6.8-HR Accordion Shutter has not been approved as an acceptable WRD at this time.
- b. Minimum test report information must be submitted for further review.
- c. Submit additional details and test data for approved use on single wall construction.
- d. Submit alternative or approved connection schedule for use on Douglas fir wood framing.



Gary Y. K. Chock, S.E.
Product Examiner
March 6, 2008